

## High Speed DS3/E3/ETH Routing for Data/Voice Networks



### Introduction

GDC's PacketMATE 1300 (PM-1100) is a reliable, feature-rich entry-level router for DS3/E3, BGP and demanding ethernet applications. The PM-1300 can route two DS3/E3 circuits or 100 Mb ethernet at wire speed.

The 1RU 19-inch steel rackmount chassis provides Intel CPU, high-performance memory, six 10/100/1000 ethernet ports, flash storage, and two expansion slots. Each expansion slot accepts network add-on cards with ethernet, sync serial, T1/E1, DS3/E3, analog FXO/FXS, BRI, PRI, and 56K dial-up interfaces. These add-on cards allow the PM-1300 to connect different data and voice networks using a wide range of communications standards.

The PM-1300 employs the LINUX<sup>(TM)</sup> Router Distribution which supports NAT firewall, VPNs, Quality of Service (QoS), VLANs, VRRP failover, dynamic routing, packet filtering, bridging, peer-to-peer traffic control, lawful intercept, VoIP gateway, web filtering, and more.

The PM-1300 also supports WAN protocols including PPP, Cisco HDLC, frame relay, and ATM. The ATM and IMA capabilities support best-in-class T1/E1 solutions that run "Any Port-Any Protocol." Troubleshooting is thereby simplified for LAN and WAN connections with real-time port status and performance monitoring.

### Intended Use

The PacketMATE 1300 is part of GDC's line of high performance low cost routers. The PM-1300 is the entry-level unit that is ideal for high-speed multi-homed networks and a wide variety mid-range routing applications. The PM-1300 can be used as an Internet gateway and in the network core or edge. It delivers superior performance and reliability in a low-profile package that works where most Cisco 2800, 3800, and 7200 routers are used.

### Feature Highlights

- Low cost DS3/E3 router
- Space saving 1RU rackmount chassis
- Replaces Cisco Models 2800, 3800 and 7200
- Six 10/100/1000 ethernet ports each with its own Express bus.
- Two expansion slots support up to 12 additional 10/100 ethernet ports or 16 T1/E1 ports.
- Routes 2 DS3/E3 ports at wire speed
- Routes 1 Mpps with CPU upgrade
- VoIP gateway and SoftPBX
- PowerCode<sup>(TM)</sup> OSS ready
- Runs on LINUX<sup>(TM)</sup> OS
- High-performance cooling fans and a dual core CPU option for demanding conditions
- 31-day performance guarantee;  
1 year warranty on parts and labor;  
Free 24/7 support for 1 year
- Free software upgrades

### Front and Rear Panel Features

- Six ethernet 10/100/1000 ports with easy front panel access
- Power LED shows the router is powered on.
- Console port to configure the router via modem or laptop.
- Power switch on the back panel for security.
- Two expansion slots for add-on network cards.
- Two USB ports are provided to support future features.
- Async RS232 port to connect external devices.

## Physical Specifications

### Hardware

Chassis: Steel 1U 19" rackmount  
Processor: 2 GHz Intel P4  
Memory: 256 MB DDR2  
Storage: 128 MB flash  
Network Ports: Six GigE UTP  
Management Port: Serial console

### Performance

Linux OS  
500,000+PPS base CPU  
1,000,000+ PPS with CPU upgrade

### Expansion Interface

Two 32-bit 33 MHz expansion slots

### Dimensions

Height: 1.75 inches (44 mm)  
Width: 19 inches (483 mm)  
Depth: 15.25 inches (387 mm)  
Weight: 13 lbs. (5.9 kg)  
Shipping Weight: 18.4 lbs. (8.3 kg)

## Electrical Specifications

Power Supply Design: PFC  
AC Mains Voltage: 100 to 240 VAC  
AC Mains Frequency: 50 to 60 Hz  
Power Output: 250 W

## Options

CPU Option: Dual Core High-Performance CPU  
Memory Options: 512 MB, 1 GB, 2 GB or 4 GB  
LAN Card Options: 1, 2, and 4-port gigabit ethernet  
WAN Card Options:  
1 and 2-port DS3/E3 or HSSI  
1-port ATM DS3/E3  
1-port channelized DS3  
1, 2, 4 and 8-port serial, T1 or E1  
1-port basic rate ISDN (BRI)  
1-port 56 K modem  
Voice Card Options:  
1 to 4-port FXO/FXS  
1, 2 and 4-port ISDN BRI  
1, 2 and 4-port T1/E1 PRI  
Power Supply Option: -48 V DC

## Software Features

Linux -based OS  
High-performance kernel  
Scalable platform  
Menu-driven configuration  
PowerCode BMU function  
VoIP gateway and SoftPBX  
Web caching  
Web filtering with Netsweeper  
Intrusion detection and prevention  
On-line and off-line upgrades  
Local and remote logging  
Real-time monitoring  
Quality of Service (QoS)  
Bandwidth limiting  
Packet filtering  
Port forwarding  
Packet processing by PVC or DLCI  
Peer-to-peer traffic control  
System scheduler  
PPP, Cisco HDLC, and frame relay  
MLPPP and MLFR  
Multilink DSL aggregation  
PPPoE and PPPoA client and server  
ATM and IMA  
CEF-compatible bonder  
RIP, OSPF, IS-IS and BGP  
SNMP or NetFlow/Æ accounting  
NAT firewall (1:1 and 1:many)  
NTP clock synchronization  
T1/E1 drop and insert  
LAN and WAN bridging  
Concurrent bridging and routing  
Secure telnet (ssh v.2)  
L2TP tunneling (LNS and LAC)  
GRE, IPIP and CIPE tunneling  
Remote RADIUS  
TACACS+  
DHCP client and server  
IPSec and SSL VPNs  
VRRP router failover  
Lawful intercept  
VLAN tagging  
IPv6



Front Panel

Rear Panel